

A CONCEPTUAL NUNITE PLATFORM BUSINESS MODEL: AI-BASED HEALTH COACHING FOR HABITS, SLEEP, AND NUTRITION

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Abstract: To develop a conceptual business model for NuNite, a digital platform and mobile application, to develop solutions for target customer segments, which are students, working professionals, B40 seekers, and donors, who suffer from fatigue, poor sleeping patterns, and inconsistent adherence to health-promoting behaviors, as a result of busy lifestyles and information overload. Solving these problems is relevant to the 13th Malaysia Plan (13MP), which focuses on the improvement of public health and wellbeing, and the National 4IR Policy, which advocates the use of emerging digital technologies such as Artificial Intelligence (AI) to improve the quality of life. Using basic Artificial Intelligence (AI) technology and user-centric design logic, NuNite is providing a digital health solution that is sustainable and enables people to improve their health. The approach used for this study incorporates the Design Thinking methodology with literature review, competitor Business Model Canvas (BMC) benchmarking, and survey-based validation to understand user needs. The BMC, Value Proposition Canvas (VPC), and Environment Map (EM) were used to develop an initial business model prototype, which was tested using a survey with target customer segments. The validated business model and prototype were then established, and a strategy canvas was created to compare with other established competitors. The results showed that many people want easy health solutions that are personalized and offer little effort. This response was the impetus for the validated business model, which focused on micro-habit interventions and self-guidance as the main components. Building on the research done, future works will focus on developing a complete business plan centred around the validated model.

Keywords: mobile application, B40, fatigue, artificial intelligence (AI), Design Thinking, micro-habits.

1. INTRODUCTION

In this digital age, chronic fatigue and lack of sleep have been prevalent, with approximately 10–30% of the general adult population affected by sleep problems and poor sleep quality[1][2]. Rapid urbanisation, long working hours, and digital devices are all contributing factors to the growing concerns of insufficient and disrupted sleep in Asia [3][4]. As we as a nation move on in the pursuit of reaching a developed and high technological status, society pushes individuals to maintain peak productivity, which leads to an exhaustion epidemic. The consequences of lack of sleep may not have an immediate impact on health, but chronic sleep loss seems to have adverse effects on a person's well-being [5]. This situation results in individuals having difficulty in maintaining a healthy lifestyle, and the wellness alternatives are flooded with applications or platforms that demand a high cognitive load. Consequently, individuals often feel stressed and guilty when they can't stick to these strict digital schedules, which makes their daily stress worse and makes it harder for them to adopt the simple, long-lasting habits that are good for their health and productivity.

Initially, it is imperative that we address this issue as it is an extreme pain for individuals who need to maintain their daily productivity to meet critical deadlines. The effect of the exhaustion epidemic can be seen in high-stress work environments where individuals are constantly being pushed to work to their absolute limits every day. Service seekers, particularly the B40 community, often face difficulty in finding the time and financial resources to adopt sustainable wellness routines. Moreover, not all individuals are willing to pay for premium wellness subscriptions or dedicate hours to complex health tracking applications in order to improve their physical and mental health [6]. For that reason, the time taken for a person to recover from burnout increases with no guaranteed improvement in their daily lifestyle. Therefore, it is important to help these exhausted individuals, especially the vulnerable B40 segment, to nurture sustainable health habits through the use of simple, low-friction digital interventions.

The extreme pains mentioned prior are also one of the challenges faced by our country to achieve the Thirteenth Malaysia Plan (13MP) particularly to enhance the effectiveness of healthcare services[7], specifically in delivering human-centric technology and improving the overall quality of life. Providing accessible, low-cognitive-load wellness opportunities for everyone struggling with fatigue will help them better adjust to the demanding digital future. With the emergence of a resilient and healthy workforce in Malaysia, the nation can produce more quality output that matches global standards while significantly reducing the long-term patient burden on healthcare service providers. Meanwhile, for corporate donors and sponsors aiming to fund impactful community programs, addressing these pains ensures that health inequalities are reduced and no one is left behind, which is integral to achieving a comprehensive, sustainable, and inclusive national development.

The important job to do is for individuals to achieve better sleep with consistent progress. Currently, there are a lot of comprehensive tracking apps on the global and local wellness markets that utilize the B2C subscription revenue model, where users are limited to features unless they opt for the premium subscription. These apps' main value proposition is to use gamification and detailed analytics to keep an eye on complicated biometric data and record daily lifestyle metrics. However, these conventional solutions do not fit with the exhaustion epidemic situation due to their demanding a high cognitive load from their users. Excessive gamification features—manifesting as too many badges, constant pop-ups, frequent notifications, and excessively complex social comparisons—can shift the user experience from autonomy-supportive to autonomy-thwarting, undermining competence through informational overload, and impairing relatedness by diluting meaningful social interactions [8]. Furthermore, these platforms do not meet the main goals of the Thirteenth Malaysia Plan (13MP) of 'raising the floor', which aims for inclusiveness, including B40 individuals, by promoting the premium subscription model. Rather than strengthening society, these apps unintentionally increase the daily stress of vulnerable groups by focusing on making money instead of providing accessible mental health support. Hence, new, innovative, and more relevant solutions like NuNite are needed.

2. OBJECTIVES

The main objectives of this paper are to develop a conceptual digital platform business model for NuNite that addresses and provides services, including the following:

- a. To develop a weekly health coaching app that extracts complicated health data into one or two easy, doable steps.
- b. To give users a genuine and empathetic platform that emphasizes encouraging advancement over creating guilt over unfulfilled objectives.
- c. To provide highly customized, micro-habit interventions by monitoring subtle indicators (such as irregular sleep).
- d. To create a Value Proposition Canvas (VPC) and Business Model Canvas (BMC) that will enable the company to enter the wellness market with a very compassionate approach.

3. METHODOLOGY

To provide a framework for managing our organization, this paper will adapt the Design Thinking methodology by concentrating on five different stages of the process. Develop empathy, define, brainstorm, prototype, and test. A Business Model Canvas (BMC), a strategic management diagram designed to aid in the development of a new business model, will be created in addition to the approach. A Value Proposition Canvas (VPC) will also be created, which basically helps position our product in the target customer segment's extreme pains. After that, an Environment Map (EM) will be created that incorporates macroeconomic pressures, market forces, key trends, and competitive evaluations. Finally, a strategy canvas will be implemented to highlight the differences between our company's and our competitors' offerings in terms of important competing factors. The strategy canvas will demonstrate how our company can outperform its rivals by graphically mapping the factors on which the industry competes and contrasting our offering profile with those of current players.

4. LITERATURE REVIEW

4.1 The Psychology of Simplified Habit Formation

Traditional health plans often are not effective because it forces people to do things that is difficult to do consistently. It is better to give people advice like telling them to do one thing over and over again in the same situation every time [9]. This way, people can make this thing a habit. It will be easy for them to keep doing it. Their research shows that complicated plans are hard to stick to. Small changes can become a habit quickly and people can keep doing them without thinking about it too much.

4.2 The Drawbacks of Information Overload

The modern digital health sector is making people feel really tired of using health apps. This is called Health App Burnout. People get mentally exhausted from having to keep track of what they do and monitor at a lot of health information [10]. This makes people feel anxious and unsure of what to do to feel in control. Looking at too much information can make people not use the apps anymore, so they stop using these annoying services [11].

4.3 Efficacy of Personalized Efforts and AI Support

Modern research shows that personalized reminders can help people improve their health. In a study published in *Frontiers in Sleep* in 2022, it states that people who followed their own schedule recommendations, like specific wake-up times or light exposure, had better sleep scores than those who practiced general advice [12]. These recommendations were small but made a big difference. A recent review in *JMIR Formative Research* in 2023 found that systems using AI with language are seen as more caring and reliable than traditional advice [13]. These systems help people feel more confident in taking care of themselves. Nunita uses AI to send reminders that feel caring and realistic, and not just clinical, based on the *JMIR Formative Research* framework from 2023. This approach helps people get sleep and health outcomes. The study suggests that small personalized changes can add up to make a difference.

4.4 Benchmarking

4.4.1 Calm (<https://www.calm.com/>)

Calm is a place where you can find sleep stories and meditations in one spot. It is really good at helping you relax. The thing that makes Calm useful is that it has a lot of advice and entertainment to choose from. However, Calm is lacking in certain aspects. One of the weaknesses is that it does not look at the reasons why you are not sleeping well, such as staying up late or using your phone before bed. Calm just helps you feel better for a moment, but it does not really help you make good sleep habits that last. Nunita wants to help you make sleep habits with just a couple of easy steps. Calm is good for the short term, but it does not fix the problem; instead, it just gives you a break from it.

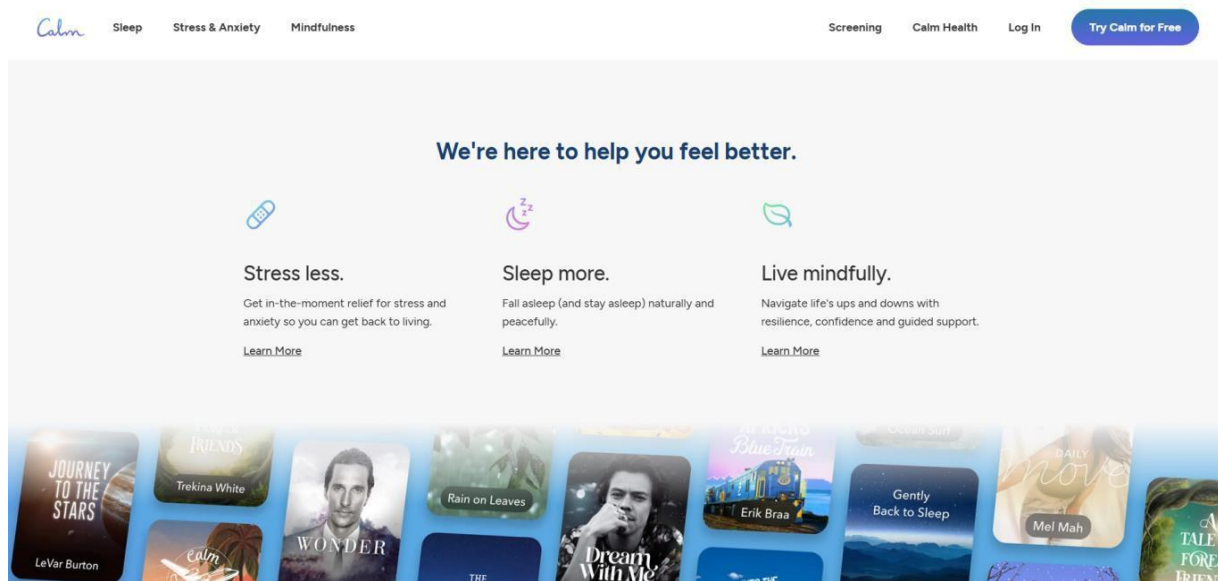


Fig. 1: Calm Website



Fig. 2: Calm Business Model Canvas

4.4.2 Rise Science (<https://www.risescience.com/>)

Rise Science uses tools to track how well people sleep and their daily routines, kind of like how some job websites match people with jobs based on lots of data. The way Rise Science does things can be a bit too rigid with the information it gives. When it shows people that they are not sleeping well and gives them a lot of information, it can actually make them feel anxious about their sleep, which is called "orthosomnia". This anxiety is a problem for the user. Our system does things differently. It gives people the right amount of information about their sleep, not too much. It tries to make the experience feel good and not guilty. When someone is having a tough time, our system suggests easier things to do so the person does not feel overwhelmed. This way, using Nunate feels realistic, like it is actually helping people and not just giving them problems to worry about. Nunate and Rise Science are different because our system wants people to feel good about their sleep and not anxious. Rise Science and Nunate have ways of helping people with their sleep, but our system is more focused on making people feel good.

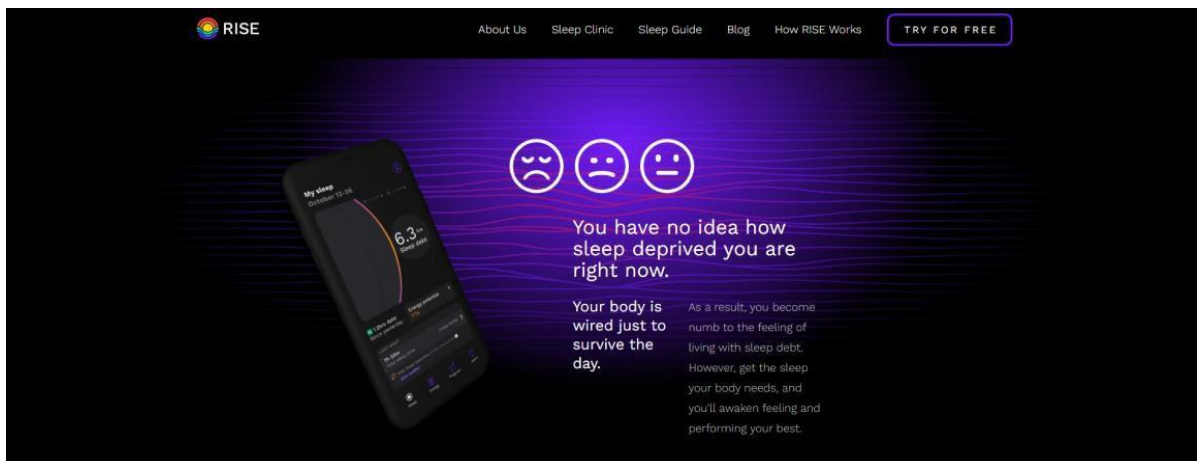


Fig. 3: Rise Science Website

Rise Science Business Model Canvas

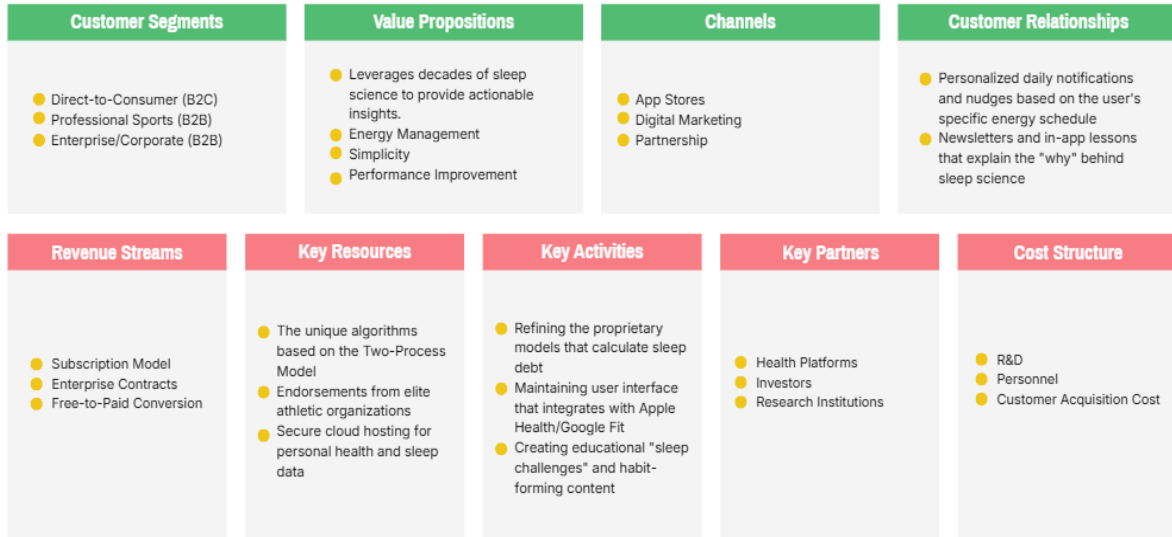


Fig. 4: Rise Science Business Model Canvas

4.4.3 Oura (<https://ouraring.com/sleep-and-rest>)

Oura is the best in the business when it comes to professional-grade hardware and bio-data. It gives us information that we can compare to the best health technologies in the world. Oura tracking is very precise as their platform has a lot of information, which can be too much for people to handle. This means that people have a lot of data that they do not know what to do with. Many people feel overwhelmed by all the health data they are getting. This can make them feel to lose interest in using the app anymore. Nunate helps with this problem by making the information from Oura easier to understand. It does this by removing the information that's not important and giving people suggestions that are just for them based on what the data is saying. This makes it easier for people to start using Nunate and to use it every day compared to big companies, like Oura.

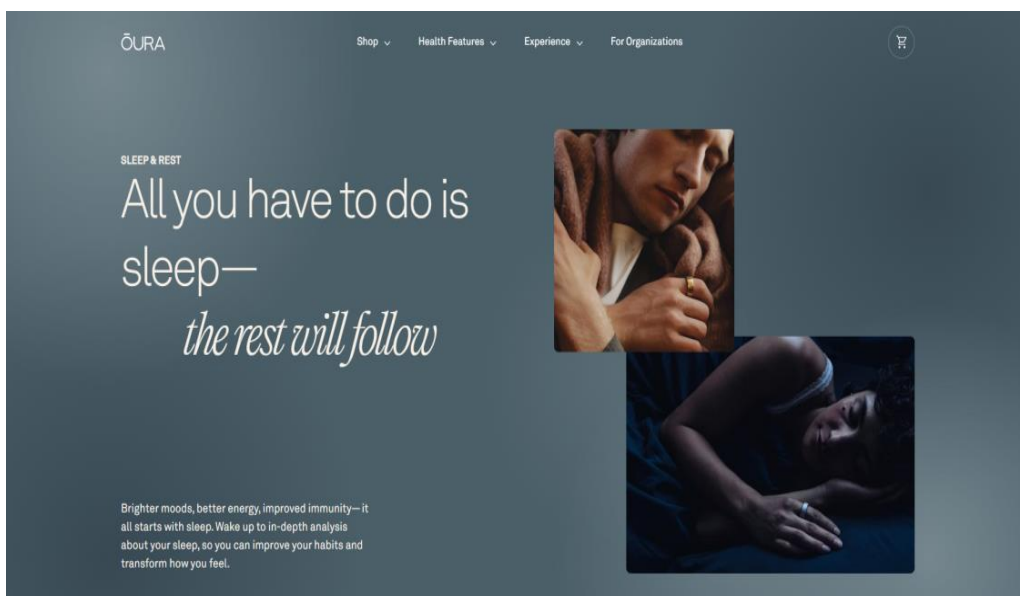


Fig. 5: Oura Website

Oura Model Canvas

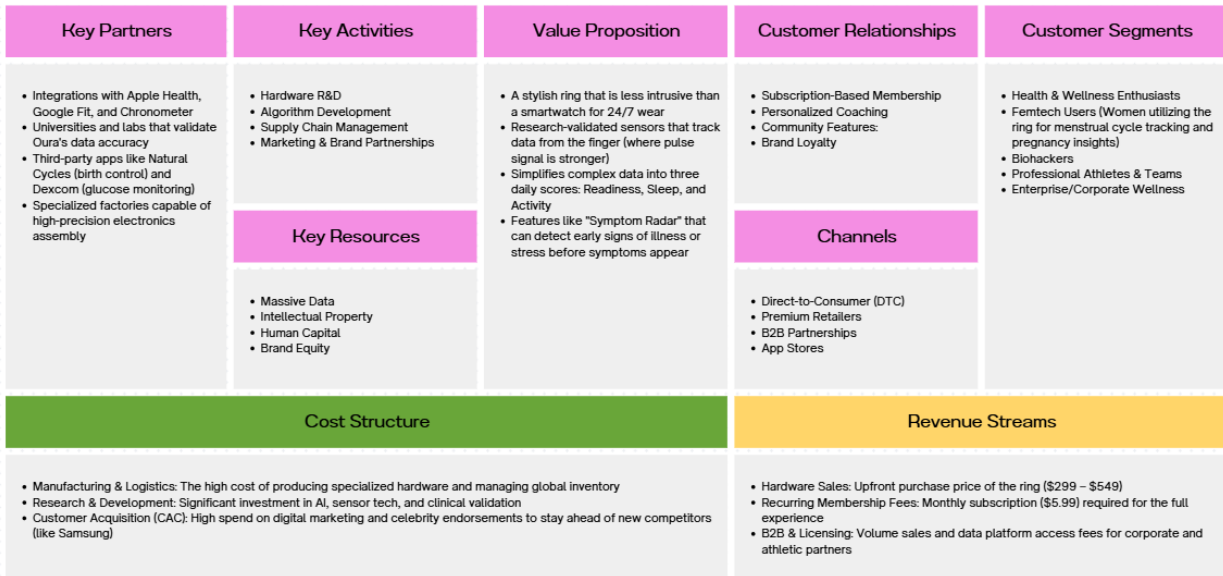


Fig. 6: Oura Business Model Canvas

5. INITIAL BUSINESS MODEL

A. Business Model Canvas (BMC)

The initial Business Model was developed through a collection of literature reviews and competitor Business Model Canvas (BMC) benchmarking.

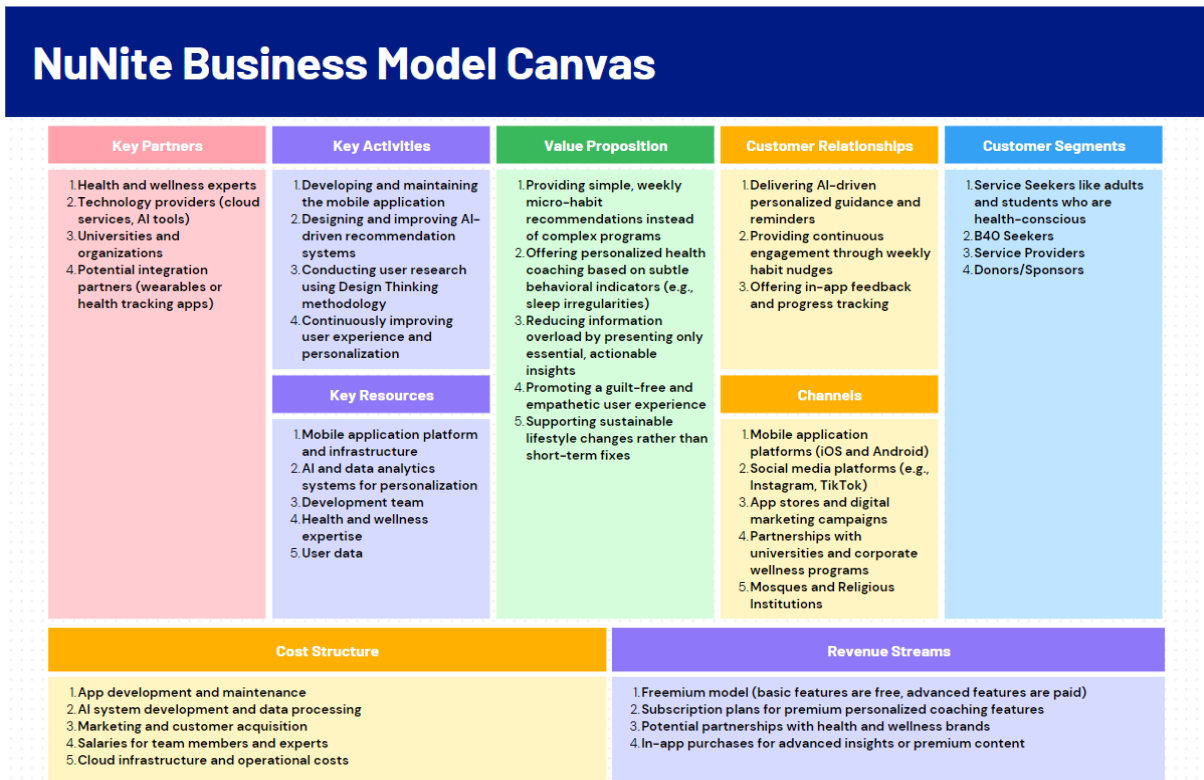


Fig. 7: Initial Business Model Of Nunite

B. Value Proposition Canvas (VPC)

The Value Proposition Canvas (VPC) was developed based on the literature review and competitor Value Proposition Canvas (VPC) benchmarking to align NuNite’s value offerings with the customer segment’s jobs, pains, and gains.

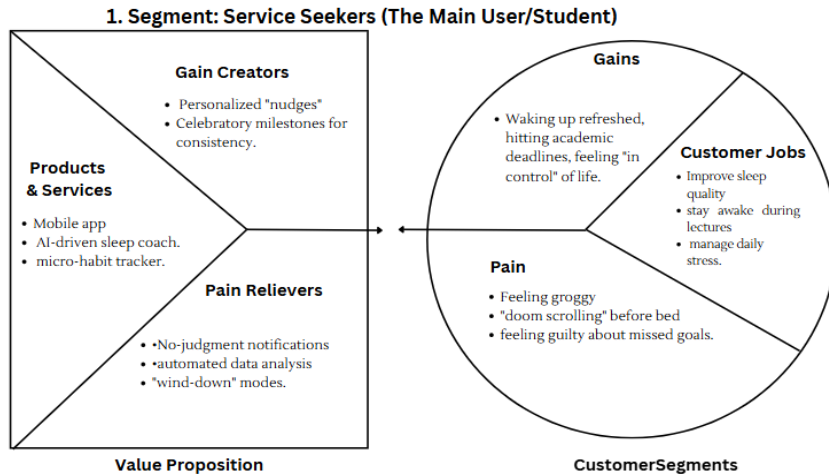


Fig. 8: VPC for Students and Employed Workers

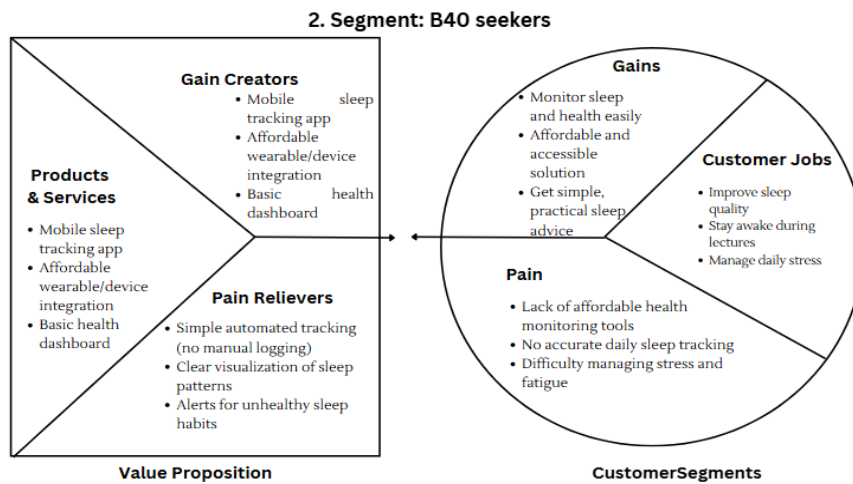


Fig. 9: VPC For B40 Seekers

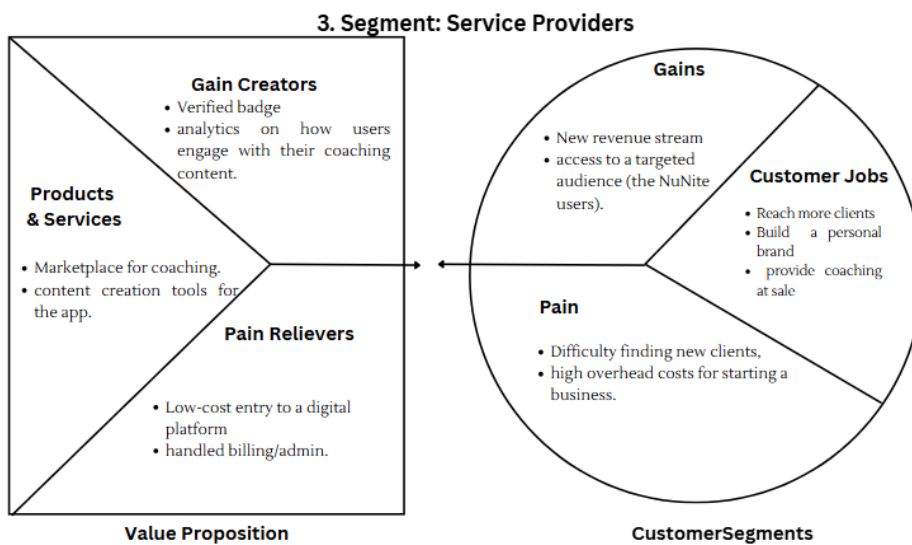


Fig. 10: VPC For Service Providers

4. Segment: Donors & Sponsors (University/NGOs/Brands)

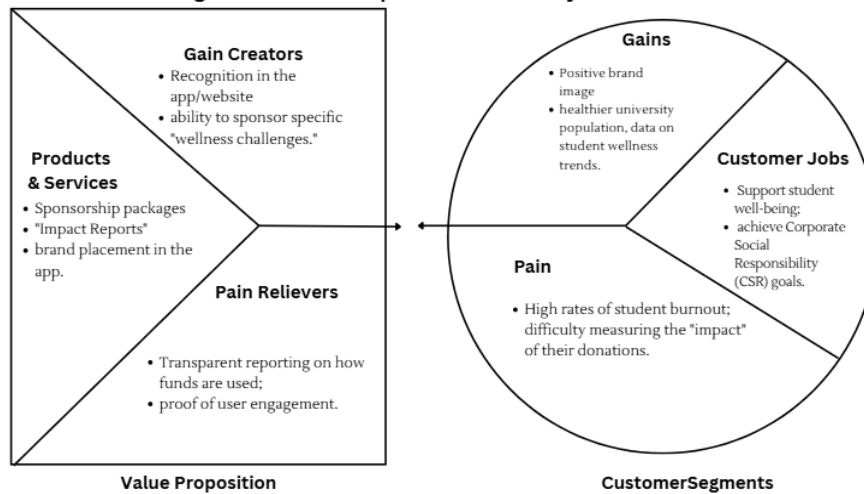


Fig. 11: VPC for Universities, NGO's and Brands

6. VALIDATION OF INITIAL BM



Fig. 12: Dashboard of survey on NuNite

NuNite had performed a survey of the customer segments, which totalled 50 responses, providing insights into user behavior, pain points, preferences, and willingness to adopt the proposed solution. The survey was distributed to the respondents aged between 18 and 45+ who come from various backgrounds, including students and working professionals experiencing fatigue, poor sleep quality, and difficulty maintaining healthy habits.

The majority of respondents fall within the young adult category, with a significant proportion being students and employed individuals, and over 70% indicating that they lead busy daily schedules. This supports the assumption that NuNite's primary users are time-constrained individuals. A large percentage of respondents reported experiencing fatigue frequently, while most rated their sleep quality as average to poor. Key challenges identified include stress and burnout, difficulty staying consistent, and information overload, reinforcing the need for a simpler and more manageable health solution.

Additionally, more than 70% of respondents have previously used health or wellness applications, yet their continued struggles indicate dissatisfaction with existing solutions. The value proposition of NuNite is strongly supported, as over 70% of respondents found the idea of simple weekly micro-habit suggestions appealing, and a majority emphasized the importance of a personalized and guilt-free experience. The freemium model is clearly validated, with over 70% willing to use the app if basic features are free, although willingness to pay for premium features is more moderate, with many respondents indicating hesitation. Furthermore, responses to the donation-based question reveal that more than half of respondents are open to contributing financially in the future, while a significant portion remain uncertain. This suggests that a donation or optional contribution model could serve as a supplementary revenue stream, particularly if users perceive strong value and emotional connection with the platform.

Overall, the findings demonstrate a strong alignment between user needs and NuNite's core offering, confirming that a simplified, personalized, and low-pressure health coaching approach has high potential for adoption among the target market. Thus, NuNite's business model is relevant and has a high chance of being developed

7. VALIDATED BUSINESS MODEL

A. Validated Business Model

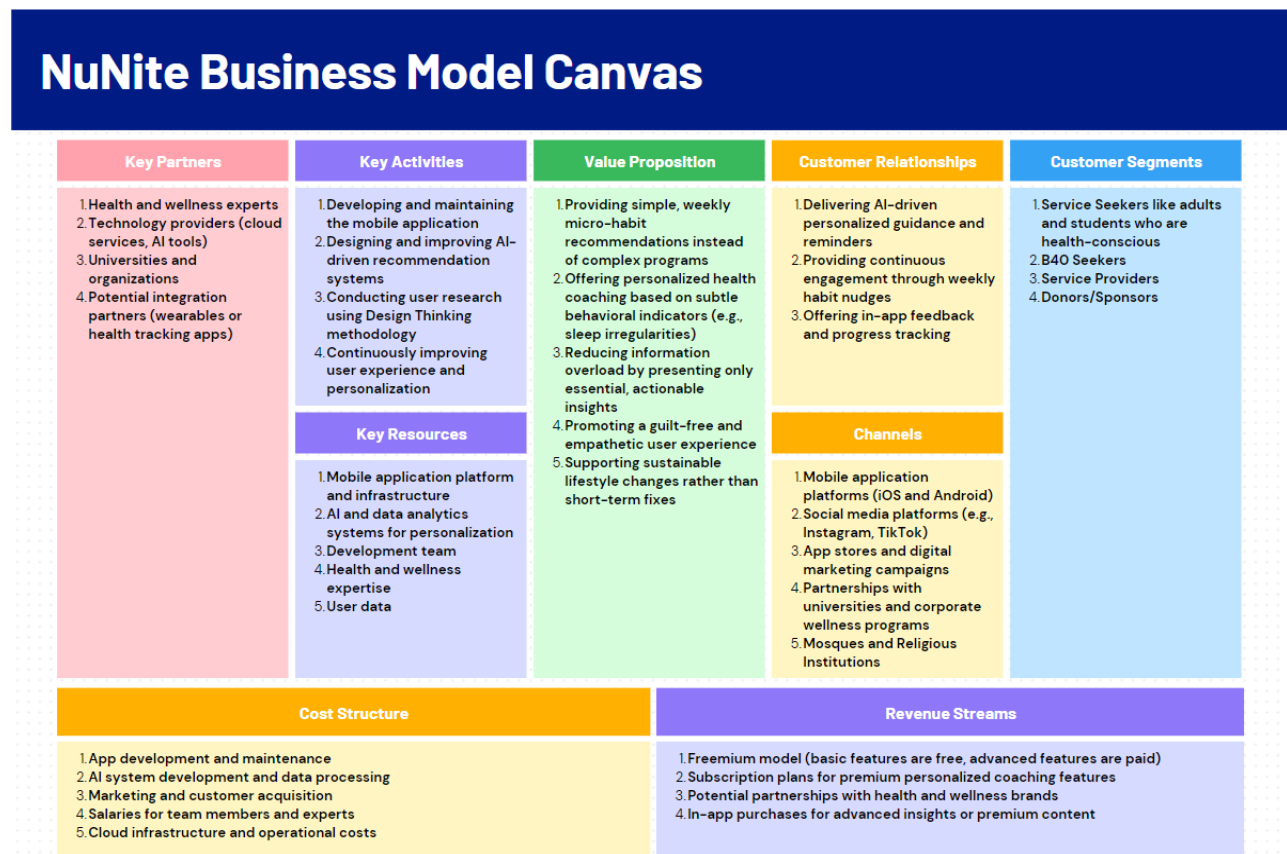


Fig. 13: Validated Business Model of Nunite

The validated Business Model Canvas (BMC) for NuNite was refined based on the findings obtained from the survey conducted during the validation phase. The results provided meaningful insights into user behavior, preferences, and expectations, allowing the initial business model to be adjusted to better align with real user needs.

I. Customer Segments (CS)

It is evident that the primary customer segments consist of students and working professionals who experience fatigue, poor sleep quality, and difficulty maintaining consistent healthy habits due to busy and demanding lifestyles. These users often face time constraints and cognitive overload, making them less likely to engage with complex health applications. As such, NuNite's focus has been refined to specifically target individuals who require simple, efficient, and low-effort health solutions.

II. Value Proposition (VP)

The results strongly support the need for a simplified and personalized approach. Users demonstrated a clear preference for micro-habit recommendations that involve only one or two actionable steps, rather than detailed tracking systems. Additionally, the importance of a guilt-free and non-judgmental user experience was emphasized, indicating that emotional support plays a critical role in user engagement. Therefore, NuNite's value proposition has been strengthened to focus on delivering personalized, low-pressure guidance that reduces information overload while promoting sustainable habit formation.

III. Customer Relationship

Customer relationships have been refined based on user preferences identified during the validation process. The survey results indicate that users prefer supportive and low-pressure interactions rather than frequent notifications and strict performance monitoring. Therefore, NuNite adopts a relationship strategy centered on empathy, trust, and personalization. Through AI-driven recommendations and weekly micro-habit nudges, users receive relevant guidance without feeling overwhelmed by excessive information. This approach helps foster long-term engagement and habit consistency while reducing the guilt and anxiety commonly associated with traditional wellness applications. Furthermore, by maintaining a non-judgmental and supportive environment, NuNite strengthens user loyalty and encourages continuous use of the platform, ultimately improving customer retention and satisfaction.

IV. Channels

NuNite's reach to its users remains primarily digital, with the mobile application serving as the core platform for delivering personalized health coaching and micro-habit recommendations. Supporting channels such as social media platforms, including Instagram, TikTok, and Facebook, are used to increase awareness and engagement among students and young professionals. University networks are also utilized to promote the application through student organizations and campus wellness initiatives. In addition, partnerships with mosques, NGOs, and community organizations can help NuNite reach underserved communities, particularly B40 individuals who may benefit from accessible and affordable wellness support. These channels not only increase market reach but also strengthen the platform's credibility and alignment with the inclusiveness objectives of the 13th Malaysia Plan (13MP). The survey findings further support these channels, as the majority of respondents indicated a preference for mobile-based solutions and digital communication.

V. Key Activities

NuNite focuses on the continuous development and maintenance of the mobile application to ensure reliability and usability. In addition, significant effort is placed on improving AI-based recommendation systems to enhance personalization accuracy. User behavior analysis is also conducted to refine features and better meet user needs, while marketing and user acquisition activities are carried out to expand the platform's reach within the target segments.

VI. Key Resources

NuNite primarily consists of its mobile application platform, which serves as the core medium for delivering services to users. In addition, AI-driven personalization systems play a crucial role in enabling tailored recommendations based on user behavior. The development team, including software engineers and UI/UX designers, is essential for maintaining and improving the system, while user data acts as a critical resource for continuously enhancing personalization and user experience.

VII. Key Partners

NuNite's collaboration with health and wellness experts and technology providers continues to be essential for ensuring the credibility, effectiveness, and technical reliability of the platform. Health and wellness professionals, such as nutritionists, dietitians, fitness trainers, and mental health specialists, play a crucial role in validating the content and recommendations provided, ensuring that users receive accurate, safe, and evidence-based guidance. At the same time, partnerships with technology providers, including software developers, cloud service providers, and data analytics firms, are important for maintaining system performance, scalability, and security as the user base grows.

VIII. Cost Structures

The cost structure listed includes all the necessary funding in order to keep the business running, with primary costs associated with application development, AI infrastructure, marketing, and operational expenses. However, the validated model highlights the importance of investing in scalable and efficient technologies to support long-term growth.

IX. Revenue Stream

The freemium model is the most suitable approach. A significant proportion of respondents expressed willingness to use the application if basic features are free, while a moderate percentage indicated openness to paying for premium features. In addition, the inclusion of an optional donation-based contribution is supported by respondents who indicated willingness to contribute in the future, suggesting potential for an additional supplementary revenue stream.

B. Environment Map

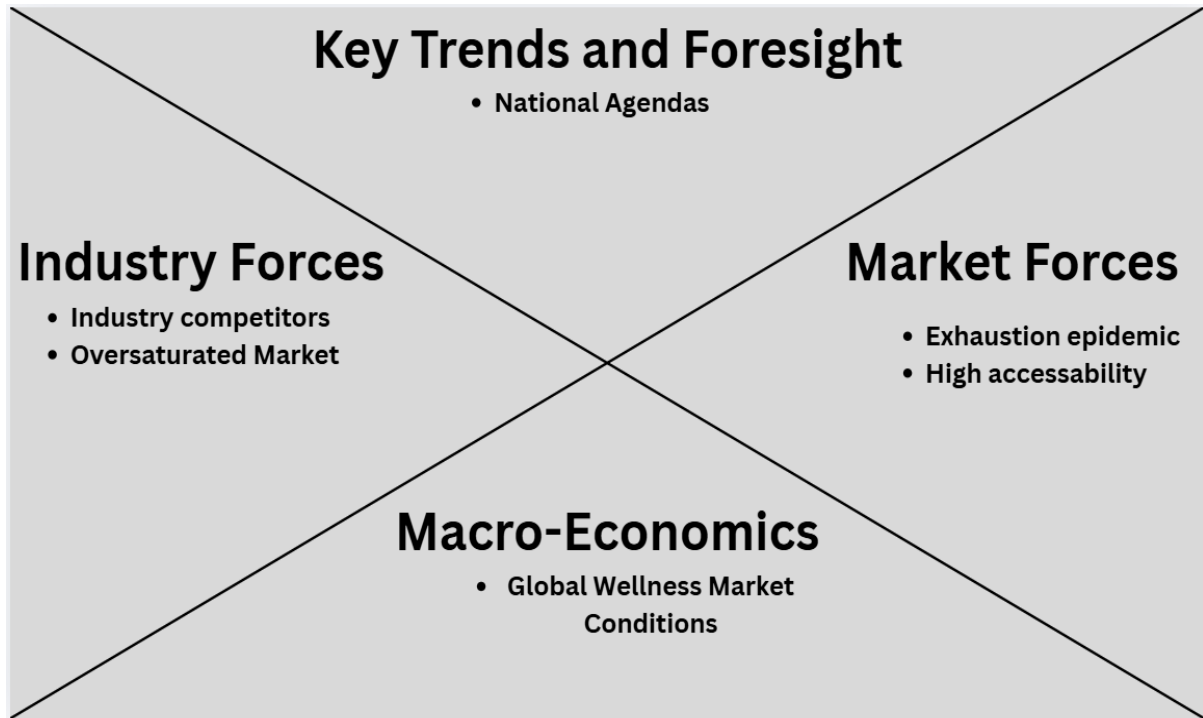


Fig. 14: Environment Map

I. Key Trends and Foresight

Global trends towards digital wellness are converging with pivotal national priorities centred around quality of life, socio-economic care, and digital equity. The shared national missions, as highlighted in the Thirteenth Malaysia Plan (13MP), focus heavily on initiatives that build mental resilience and help us lighten our load of daily living. We must create digital solutions designed to ease societal burdens if we want a sustainable and inclusive nation [14]. NuNite phases out data exploitation models and utilizes adaptive artificial intelligence to create a kinder technology ecosystem that aligns with our aspirations for resilient, quality lives.

II. Market Forces

Driven by hyper-connected lifestyles, rapid urbanization, and high-stress work environments, the primary market force dictating consumer behavior today is the modern exhaustion epidemic. There is a chronic fatigue and burnout in individuals, coupled with a low cognitive bandwidth available for taking in convoluted lifestyle overhauls. Workers in hyperconnected environments report cognitive overload that impairs focus and leads to reduced productivity. There is massive market demand for health interventions that are highly accessible [15]. Service seekers, especially vulnerable demographics such as the B40 community and retrenched workers, desperately require wellness tools that are not only financially but also psychologically accessible. NuNite reckons with these intense market forces by emphasizing extreme ease-of-use and compassionate leniency, offering simple, weekly one-step nudges that let users make sustainable health improvements without taxing their daily anxieties.

III. Industry Forces

The digital health sector is highly saturated with established industry competitors. However, these companies rely too much on demanding significant efforts from their users, which will result in high customer churn. Furthermore, an oversaturated

app market can affect people with less digital literacy or limited financial resources more harshly [16]. Therefore, there is an urgent need for a wellness application that prioritizes inclusivity. Nunite distinguishes itself from these by offering a low cognitive load to our users by passively and automatically doing these tiny nuances on their behalf. The end goal for the users is to consistently progress towards getting better sleep through micro-habits.

IV. Macro-Economics

From a macro-economic perspective, the wellness market is highly driven by the subscription economy. However, increasing inflation and possibility of retrenchment along with daily cost-of-living have taken a huge toll on disposable income in particular for B40. Nunite adopts the framework and improves upon it by offering a “freemium” option, where users with a lower financial budget can benefit from some of the premium features while not be burdened by the thought of it being costly. This way Nunite has the potential to attract more customers by providing users with free access to basic features while offering enhanced functionalities, exclusive content, or ad-free experiences through paid upgrades. Freemium models are a promising solution for pushing out applications on a saturated marketplace and connecting with the core user demographic [17].

C. Strategy Canvas

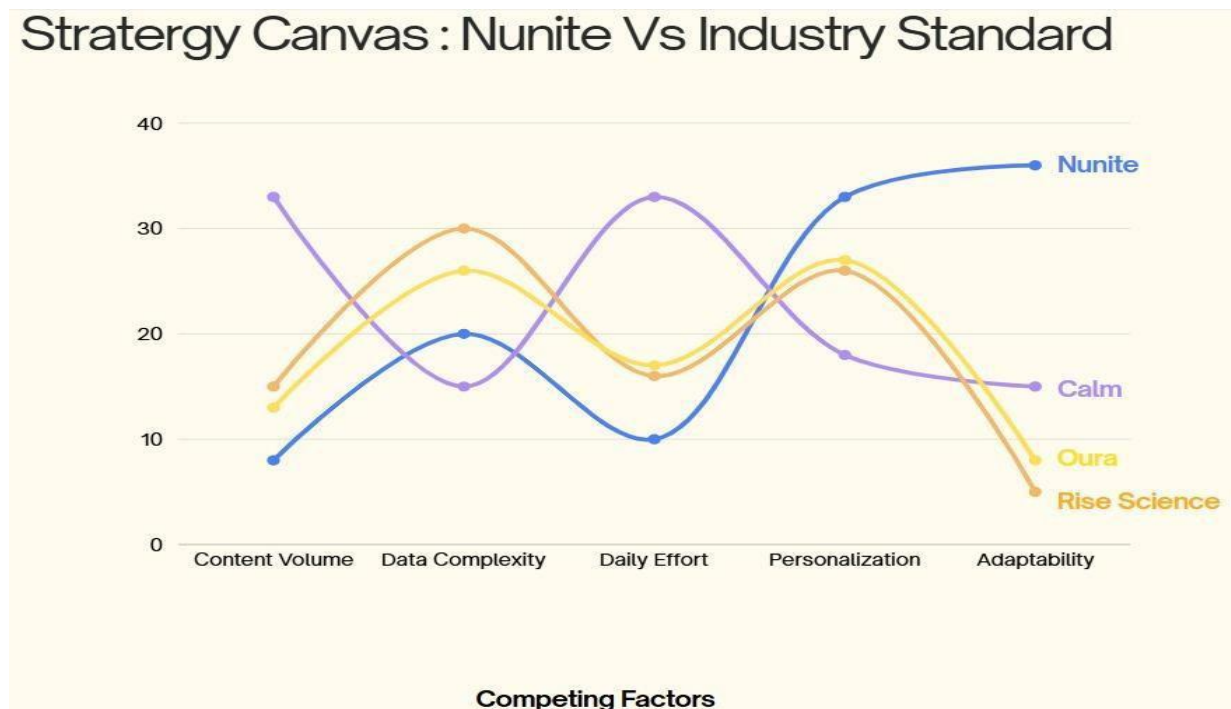


Fig. 15: Strategy Canvas (Comparison to other companies)

The Purple Cow of Nunite is special because it helps people change their behavior in a unique way. Unlike Calm, Oura and Rise Science, Nunite does not bombard users with much information or require too much effort. Instead, it provides an easy-to-use experience that does not confuse users with complicated data. Nunite is different from its competitors because it helps users manage their habits in an easy way. This approach is more flexible and adaptable to a user's lifestyle compared to Oura's data structure or Calm's overload of information. Nunites' focus on Personalization and Adaptability makes it a unique app in the health and behavioral management market.

Our Blue Ocean Strategy solution moves Nunite away from the world of tracking and into a new space where we can help people live better. We do this with the Four Actions Framework. We get rid of the feeling of being overwhelmed by massive data that you find in Calm. We also make it easier for people to use our system by removing the need for hardware, like Oura, or manual logging like Rise. At the time, we make our system more personalized by adjusting the difficulty of habits based on how fast or slow the user's life is going. We also create a way of doing things which is a place where people can grow and learn without feeling pressured. This means that by just tracking your health, you can easily build new habits. This makes our competition irrelevant because we solve the problem of people getting tired and giving up.

D. Low-Fidelity Prototype Apps



Fig. 16: Login Page



Fig. 17: Home Page

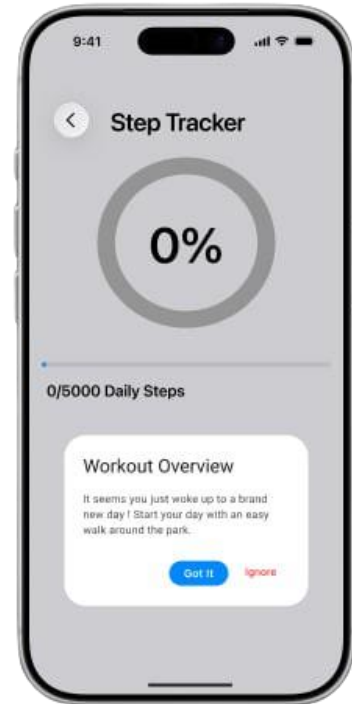


Fig. 18: Step Tracker Page



Fig. 19: Scheduler Page



Fig. N: Adaptive Notification

Figure 13 until 17 are our proposed prototype for Nunite mobile application. It consists of five pages, where the first one is the login page. Users can log in to their existing account or create a new one and if the user forgets their password, they can even change it. The second page is our homepage, which is the key to all navigation throughout the app. Users can click on their specific interest to learn more, like Sleep Tracker, Health Coach and Activities. We also have a weekly summarised report based on data that have been analysed in the past week with the help of our AI system that tracks and calculates

specific patterns of users data and suggests wellbeing improvements for the user in the future. The third page is the step tracker page which is one of our deliverables. This app can track users' current steps and what makes Nunite unique is that we give an overview of users' current progression. The fourth page is also one of our deliverables which is the scheduler page, where users can set reminders on a calendar and Nunite will integrate this data with health data to make the user more prepared for an important event. And lastly, the most noticeable feature in our app is the adaptive notification feature where a simple notification will pop out according to users' health data which act as a reminder for the user to maintain their overall health and wellbeing. This feature is unique as Nunite does not bombard users with overwhelming information to help users. All of these features are designed to influence user habits so that they wouldn't feel annoyed by the interface and will most likely use the app in the future [18].

8. CONCLUSION AND FUTURE WORKS

In the following report, a validated business model concept for NuNite, a digital coaching mobile application for busy people facing stressors related to a high-stress work environment, screen addictions, and urban stress, is presented. Among other key customer segments, the jobs-to-be-done of these customers include maintaining their energy levels daily, developing good sleeping habits, and making their health monitoring easy while dealing with severe pains of app fatigue caused by information overload, guilt about unfulfilled strict goals, inconsistent sleeping routines, and anxiety resulting from orthosomnia. Some essential gains include getting better-quality sleep, making habit formation easy, enjoying effortless tracking, and meeting SDG 3 goals. NuNite provides a solution in the form of guilt-free micro-habit reminders (one-two actions per day recommended by AI such as late night use of phones), empathic coaching, and simple analytics, which makes it relevant to national agendas such as Health Resilience in the 13th Malaysia Plan[7], incentives within Budget 2026 to improve digital wellness, AI within the MyDigital policy, and the National 4IR Policy [19]. The most important advantages of NuNite are its "purple cow" of empathic simplicity, which is better than apps such as Calm (temporary relief), Rise Science (anxiety-inducing metrics), and Oura (data overwhelm), positioning NuNite as highly relevant via validated BMC/VPC pain relievers and gain creators tailored to user realities. Future work will create a full business plan based on the validated BMC. This will include revenue projections, high-fidelity wireframe prototypes of the MVP, scalability analysis for various B40/user segments, and partnerships for wearable interfaces to improve AI-driven insights

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